



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,310	07/14/2000	Hiroshi Narai	Q60136	8380

7590 01/10/2003  
Sughrue Mion Zinn Macpeak & Seas  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3202

EXAMINER

JOYCE, WILLIAM C

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 01/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

2

<b>Office Action Summary</b>	Application No. 09/617,310	Applicant(s) NARAI ET AL.	
	Examiner William C. Joyce	Art Unit 3682	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This Office Action is in response to the amendment filed October 25, 2002 for the above identified patent application.

#### ***Election/Restrictions***

1. Claims 7-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Examiner acknowledges the amendment to claims 7-12 such that they depend from claim 1. Accordingly, if claim 1 is found to be an allowable generic claim, the restriction will be withdrawn and claims 7-12 will be allowed.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original specification does not appear to describe the claimed layer as having a non-metallic inclusion with a diameter between .01mm and .115mm.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Okubo et al. (US Patent 6,113,514).

Okubo et al. discloses a manufacturing procedure for producing a disk for a toroidal continuously variable transmission. Referring to column 2, lines 37-43, Okubo et al. discloses that the size of non-metallic inclusions are known to influence the strength of a material with respect to repeated bending stress. The manufacturing procedure of Okubo et al. prevents non-metallic inclusions of high density from being present within a predetermined distance 1.5b of the traction surface, wherein a high density inclusion is .01mm or larger (for example, see column 5, lines 43-48). Examiner

notes that the predetermine distance 1.5b is considered to fall within the limitation .4mm or less. In reference to Okubo et al., if you consider the outer layer of the traction surface to have an infinitely small depth, the outer layer would not contain any high density non-metallic inclusions and would be positioned less than .4mm from the traction surface.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al. (US Patent 6,113,514).

As described above, Okubo et al. teaches that the size of non-metallic inclusions present in a rolling member and the location of non-metallic inclusions within the rolling member are known to influence the strength of the rolling member with respect to repeated bending stress. More specifically, Okubo et al. teaches increasing the durability of the rolling member by preventing non-metallic inclusions of high density from being present within a predetermined distance 1.5b of the traction surface, wherein a high density inclusion is .01mm or larger. It is understood the opposite of the above teachings hold true, in that a rolling member having non-metallic inclusions larger than .01mm will produce a less durable rolling member. Further, a manufacturing engineer

in the art would recognize that producing a rolling member having non-metallic inclusions of .01mm or less, as taught by Okubo et al., would increase manufacturing waste and the cost of production.

It would have been obvious to an engineer in the art at the time the invention was made to manufacture the rolling member of Okubo et al. with non-metallic inclusions of .015mm, motivation being to reduce the manufacturing costs of the rolling member while providing sufficient durability of the rolling member for a given application.

8. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitamura et al. (US Patent 5,855,531) in view of Japanese Reference 06-287710 ('710).

Mitamura et al. discloses a toroidal continuously variable transmission having an input disc, and output disc, and roller bearings. Mitamura et al. does not disclose the discs or the bearings having the claimed layer formed at .4 mm or less from a surface thereof such that the layer does not contain a non-metallic inclusion having a maximum diameter of 0.115mm or more. The prior art Japanese Reference '710 teaches forming rolling bearings from steel and not having a non-metallic inclusion greater than .008mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the transmission of Mitamura et al. with rolling bearings formed from steel and not having a non-metallic inclusion greater than .008mm, as taught by Japanese Reference '710, motivation being to increase the durability of the bearings of the transmission.

***Response to Arguments***

9. Applicant's arguments filed October 25, 2002 have been fully considered but they are not persuasive.

The new matter rejection of claims 13-14 has not been withdrawn because applicant has not particularly pointed out where the original specification describes the claimed layer as having a non-metallic inclusion with a diameter between .01mm and .115mm. Examiner acknowledges that Figure 5 shows breaking times for different sizes of defect, but the Figure does not adequately support the new limitations of claims 13-14.

The arguments with respect to the non-metallic inclusion being measured in the transmission component are not persuasive. First, a method limitation in an apparatus claim is given limited weight. If the invention is in how the transmission component is made, Examiner suggests that applicant pursue claims drawn to the method of making the transmission component. An apparatus claim must define over the prior art in terms of its structure and not the method from which the apparatus is made. Second, the prior art to Okubo et al. and Japanese Reference '710 clearly teach the structural limitations with respect to the non-metallic inclusion of the transmission component. For example, Figure 10 of Okubo et al. illustrates the positioning of non-metallic inclusions in a CVT transmission component. Further, the argument "Okubo does not teach the determination of non-metallic inclusion defect size in the machined part of the CVT" (page 6, second paragraph) is not well taken because it is not commensurate with the

scope of the claim. Specifically, claim 1 does not recite a "machined part."

Accordingly, the apparatus claims stand rejected as described above.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (703) 305-5114. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.



Application/Control Number: 09/617,310

Page 8

Art Unit: 3682

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

*William C. Joyce* 1/9/02  
William C. Joyce  
January 9, 2003 3682